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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
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10/064,032

06/04/2002

Steinar Bjaerum

15-DS-00560

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11/04/2005

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EXAMINER

LAVIN, CHRISTOPHER L

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                  |                                |  |
|------------------------------|----------------------------------|--------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/064,032    | Applicant(s)<br>BJAERUM ET AL. |  |
|                              | Examiner<br>Christopher L. Lavin | Art Unit<br>2621               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

This action is in response to the amendment filed on 08/22/05.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 6, and 11 – 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki (5,622,174).

Please see the previous office action for the rejections.

#### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 8 – 10 and 18 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki in view of Washburn (6,017,309).

Please see the previous office action for the rejections of claims 8 – 10 and 18 – 20.

In regards to claim 21 and 22, claims 21 and 22 are rejected for the same reasons as claim 8. The argument analogous to that presented above for claim 8 is applicable to claim 21 and 22. Washburn discloses coloring an image dynamically. The purpose of this operation is to use as many colors as possible within the color map, thus Washburn discloses a full dynamic color mapping operation. It should be noted that the

applicant does not define the phrase "full dynamic range" in the specification and therefore the words have been given their plain meanings.

***Response to Arguments***

5. Applicant's arguments filed 08/22/05 have been fully considered but they are not persuasive.

6. The applicant's arguments focus on the "processor" paragraph in independent claim 1 and same material in independent claim 11. The applicant argues that Yamazaki does not disclose the material in this paragraph.

The paragraph can be broken up into three requirements.

a. A processor responsive to said received signals to generate a set of parameter signals representing values of said movement parameter within said structure during said time period (As previously shown Yamazaki discloses a processor which receives the ultrasound signal and computes velocity information, i.e., parameter signals.)

b. A processor responsive to a distribution of said set of parameter signals (This portion is given little weight as long as the processor responds to the parameter signals, which it must to convert these signals into color.)

c. A mapping algorithm to generate a set of color characteristic signals representative of said values of said movement parameter (In order for Yamazaki to convert the velocity information into a color image there must be some kind of function or algorithm to perform this conversion. This is the mapping algorithm.)

As shown Yamazkai discloses all of items claimed in the processor paragraph. The same content was claimed in independent claim 11 and is rejected for the same reasons as given above for claim 1.

7. The applicant also points out that Washburn was addressed in the specification. In particular the specification states that Washburn does not disclose coloring "structure", as defined by applicant, using velocity information. This is correct and the reason why the examiner used Washburn as a secondary teaching. Washburn does teach dynamically coloring a velocity image in order to use the most possible colors.

#### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mancuso Joseph can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Lavin



**BRIAN WERNER**  
**PRIMARY EXAMINER**